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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,651	04/01/2002	Uwe Franken	H 4381 PCT/US	3119

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EXAMINER	
KILKENNY, TODD J	
ART UNIT	**PAPER NUMBER**
1733	4

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/089,651	Applicant(s) FRANKEN, UWE	
	Examin r Todd J. Kilkenny	Art Unit 1733	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 6-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 6-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 6, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer (US 2002/0038925 A1) in view of Fornsel (DE 298 05 999).

The Patent Application Publication (US 2002/0038925) to Reimer is applied as art under 102(e) based on the provisional application 60/197,836, filed Apr. 14, 2000.

Reimer disclose a method for continuous surface modification of substrates, including the surface of substrates in shoe fabrication. Referring to Figure 5, Reimer teach adhesively bonding a bottom sole (34) made of durable rubber material having a sole surface (33) to a shoe upper (albeit indirectly) and suggest modifying the sole's surface (33) with an electro-ionization device, including well-known atmospheric plasma devices (paragraphs [0041], [0042], [0080]).

Fornsel et al teach a method for treating the surface of a workpiece by plasma discharge. Such treating is suggested as pretreatment for the gluing of workpieces, wherein the plasma discharge device comprises a plasma jet.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the plasma jet of Fornsel et al as the plasma device suggested by Reimer in view of Reimer suggesting to employ well known atmospheric plasma devices

for modifying the bonding surfaces and Fornsel et al teaching a plasma device for modifying surfaces to be glued as means to improve adhesion.

As to claim 7, the plasma jet of Fornsel et al appears to define a linear plasma jet.

As to claims 10 and 11, Reimer suggest styrene-butadiene as a durable rubber for the shoe sole and suggest the adhesive employed can be a hot melt adhesive.

3. Claims 8, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimer (US 2002/0038925 A1) in view of Fornsel (DE 298 05 999) as applied to claim 6 above, and further in view of Liu (US 5,972, 257).

Reimer suggest durable rubber as the bottom sole and ethylene/vinyl acetate as midsoles, failing to suggest EVA as the bottom/outer sole.

Liu teach a process for making a foamed sole and disclose producing both he midsoles and bottom outer sole of EVA.

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ ethylene/vinyl acetate as the bottom sole material in carrying out the shoe construction method of Reimer in view of Fornsel, as EVA is a known outer sole material as evidenced by Liu and only the expected adhesively bonded shoe upper and shoe sole would be formed.

4. It is noted the reference to Reimer may be overcome by perfecting the priority to applicant's foreign German Application 199 46 785.4 and therefore an additional rejection of record is provided as presented below.

5. Claims 6, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heider (US 6,136,136) in view of Fornsel (DE 298 05 999) and optionally Hocker et al (US 4,820,580).

Heider discloses a method of bonding a sole to a shoe upper using a hot melt adhesive. Heider suggests the adhesive need be applied to only one of the surfaces to be joined, e.g., on the sole of a shoe or to the shoe upper and further suggests prior to application of the layer of adhesive, the sole and shoe upper may be subjected to a pretreatment (Col. 8, lines 44 – 49). Heider however fail to disclose pretreating with a plasma jet under normal pressure.

Fornsel teach a method for treating the surface of a workpiece by plasma discharge. Such treating is suggested as pretreatment for the gluing of workpieces.

Optionally provided, Hocker et al disclose a process for the production of composites, particularly useful as shoe soles. In bonding a polyurethane foam layer to an elastic material, Hocker et al suggest the surface of the elastic material is subjected to plasma pretreatment to improve the adhesion of the polyurethane foam layer thereto (Col. 2, lines 14 – 41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ a plasma discharge treatment to the surface of the sole as the

suggested pretreatment of Heider in view of Fornsel suggesting plasma jet pretreatment to increase the adhesion in gluing plastic workpieces and optionally in view of Hocker et al disclosure of employing plasma pretreatment in the shoe sole bonding art.

As to claim 7, Fornsel et al appear to teach a plasma processing device that comprises a linear plasma jet.

As to claims 10 and 11, in the examples of the primary reference, Heider suggests adhesively bonding a styrene-butadiene rubber sole to a leather shoe upper. Heider also suggest preheating said sole after pretreating, but prior to coating with adhesive (Col. 5, lines 6 – 24).

6. Claims 8, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heider (US 6,136,136) in view of Fornsel (DE 298 05 999) and optionally Hocker et al (US 4,820,580) as applied to claim 6 above, and further in view of Mochida et al (JP 07303503) and Liu (US 5,972, 257).

The references as combined above render obvious a method of adhesively bonding a sole to a shoe upper and pretreating said sole with plasma jet before application of the adhesive. However, the references as combined fail to suggest the pretreated surface to comprise ethylene/vinyl acetate.

As evidenced by Mochida et al and Liu, ethylene/vinyl acetate is a known sole material in the shoe art and is presented as an alternative to SBR (Mochida et al; English Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ ethylene/vinyl acetate as the sole material in carrying out the shoe construction method of the references as combined above, as EVA is a known outer sole material as evidenced by Mochida et al and Liu and is a known alternative to styrene-butadiene rubber as suggested by Mochida et al, and only the expected adhesively bonded shoe upper and shoe sole would be formed.

As to claim 12 and providing injection-molded foamed ethylene/vinyl acetate, Liu disclose an injection molding process for making a foamed EVA sole. As to roughening or swelling the sole, both the primary reference to Heider and the optional secondary reference to Hocker et al suggest solvents may be applied to the surface of the soles prior to bonding as means to further improve adhesion as is known in the art, wherein Hocker et al suggest applying the solvent primer in combination with a plasma discharge treatment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**, or if attempting to contact after December 18, 2003 (703) 571-1219. The examiner can normally be reached on Mon - Fri (9 - 5).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300

TJK